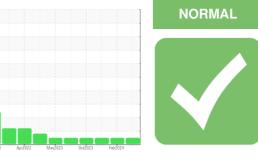


OIL ANALYSIS REPORT

Sample Rating Trend



424044 Component Diesel Engine

PETRO CANADA DURON SHP 15W40 (--- GAL)

SAMPLE INFORMATION method

DIAGNOSIS Recommendation

Resample at the next service interval to monitor.

Area

(JDZ8987)

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

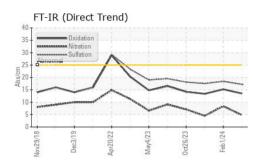
Sample Number Client Info GFL0115628 GFL0103924 GFL0093310 Sample Date Client Info 17 Jun 2024 01 Fob 2024 28 Oct 2023 Machine Age hrs Client Info 23575 0 22970 Oil Age hrs Client Info 23575 0 22970 Oil Changed Client Info 23575 0 22970 Oil Changed Client Info 23575 0 22970 Sample Status Client Info 23575 0 22970 Sample Status NorMAL NorMAL NorMAL NorMAL CONTAMINATION method init/base current history1 history2 Vica WC Method >0.2 NEG NEG NEG Giycol WC Method >0.2 1 0 -1.0 Vica MSIM 55155 >2.0 1 0 -1.0 Kine ppm ASTM 55155 >2.0 3 1 <td< th=""><th></th><th></th><th>methoa</th><th>limit/base</th><th>current</th><th>nistory i</th><th>nistory2</th></td<>			methoa	limit/base	current	nistory i	nistory2
Sample Date Client Info 17 Jun 2024 01 Feb 2024 28 Oct 2023 Machine Age hrs Client Info 23575 23556 22970 Oil Age hrs Client Info 23575 0 22970 Oil Changed Client Info 23575 0 22970 Sample Status Image Client Info Changed NoRMAL NORMAL CONTAMINATION method imil/base current history1 history2 Fuel WC Method >3.0 <1.0 <1.0 <1.0 Water WC Method >0 2 NEG NEG Weater WC Method >0 4 5 2 Iron ppm ASTM D5185m >120 4 5 2 Nickel ppm ASTM D5185m >2 <1 0 0 Silver ppm ASTM D5185m >2 <1 0 1 Auminum ppm ASTM D5185m <t< th=""><th>Sample Number</th><th></th><th>Client Info</th><th></th><th>GFL0115628</th><th>GFL0103924</th><th>GFL0093310</th></t<>	Sample Number		Client Info		GFL0115628	GFL0103924	GFL0093310
Machine Age hrs Client Info 23575 23556 22970 Oil Age Irrs Client Info 23575 0 22970 Oil Changed Irrs Client Info Changed NoT Changed NoT Changed Sample Status Irrs Wic Method >3.0 <1.0 <1.0 <1.0 Veree Wic Method >3.0 <1.0 <1.0 <1.0 Water Irrs Wic Method >0.2 NEG NEG NEG Glycol Wic Method >0.2 NEG NEG NEG NEG Veree Wic Method >5.0 <1 0 <1 10 Chromium ppm ASTM DS185m >2.0 <1 0 <1 11 10 11 10 11 10 11 11 0 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 11 <th></th> <th></th> <th>Client Info</th> <th></th> <th>17 Jun 2024</th> <th>01 Feb 2024</th> <th>28 Oct 2023</th>			Client Info		17 Jun 2024	01 Feb 2024	28 Oct 2023
Oil Changed Sample Status Client Info Changed NORMAL Not Changed NORMAL Not Changed NORMAL Not Changed NORMAL CONTAMINATION method Imit/base current History1 History2 Fuel WC Method >3.0 <1.0	Machine Age	hrs	Client Info		23575	23556	22970
Oil Changed Sample Status Client Info NORMAL Changed NORMAL Not Changed NORMAL Not Changed NORMAL Not Changed NORMAL CONTAMINATION method imit/base current history1 history2 Fuel WC Method >3.0 <1.0	Oil Age	hrs	Client Info		23575	0	22970
Sample Status NORMAL NORMAL NORMAL NORMAL NORMAL CONTAMINATION method imit/base current history1 history2 Fuel WC Method >3.0 <1.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG NEG Glycol WC Method NEG NEG NEG NEG WEAR METALS method imit/base current history1 history2 Iron ppm ASTM D5185m<>12.0 4 5 2 Chromium pm ASTM D5185m<>2.0 <1 0 <1 Nickel ppm ASTM D5185m<>2.2 <1 0 0 <1 Aluminum ppm ASTM D5185m<>2.2 <1 0 <1 1 0 <1 1 0 <1 1 0 <1 1 1 0 <1 1 0 <1 1 0 <1 1 0 1 1<	-		Client Info		Changed	Changed	Not Changd
CONTAMINATION method limit/base current history1 history2 Fuel WC Method >3.0 <1.0 <1.0 <1.0 <1.0 Water WC Method >0.2 NEG NEG NEG NEG Glycol WC Method NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 <1 0 <1 Nickel ppm ASTM D5185m >2 <1 0 <1 Nickel ppm ASTM D5185m >2 <1 0 <1 Nickel ppm ASTM D5185m >20 3 3 1 1 Lead ppm ASTM D5185m >20 3 3 1 <1 Cadmium ppm ASTM D5185m >15 <1 <1 0 <1 Cadmium ppm ASTM D5185m <	-				NORMAL		NORMAL
Fuel WC Method >3.0 <1.0	-			11 11 11			
Water WC Method >0.2 NEG NEG NEG NEG Glycol WC Method NEG NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM 05186m >120 4 5 2 Chromium ppm ASTM 05186m >20 <1 0 <1 Nickel ppm ASTM 05186m >2 <1 0 <1 Nickel ppm ASTM 05185m >2 <1 0 <1 Aluminum ppm ASTM 05185m >20 3 3 1 Lead ppm ASTM 05185m >300 2 1 <1 0 Copper ppm ASTM 05185m >15 <1 <1 0 <1 Vanadium ppm ASTM 05185m 0 10 0 <1 0 <1 Vanadium ppm ASTM 05185m </th <th>CONTAMINAT</th> <th>ION</th> <th>method</th> <th>limit/base</th> <th>current</th> <th>history1</th> <th>history2</th>	CONTAMINAT	ION	method	limit/base	current	history1	history2
Giycol WC Method NEG NEG NEG WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >20 <1 0 <1 Nickel ppm ASTM D5185m >20 <1 0 <1 Nickel ppm ASTM D5185m >2 <1 0 <1 Aluminum ppm ASTM D5185m >2 <1 0 <1 Lead ppm ASTM D5185m >20 3 3 1 <1 <1 0 Copper ppm ASTM D5185m >20 3 3 1 <1 <1 0 <1 <1 0 <1 <1 0 <1 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 ASTM D5185m 0 0 0 0 33 1 1 2	Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
WEAR METALS method limit/base current history1 history2 Iron ppm ASTM D5185m >120 4 5 2 Chromium ppm ASTM D5185m >20 <1 0 <1 Nickel ppm ASTM D5185m >2 <1 0 <1 Titanium ppm ASTM D5185m >2 <1 0 <1 Aluminum ppm ASTM D5185m >20 3 3 1 Lead ppm ASTM D5185m >20 3 3 1 0 Copper ppm ASTM D5185m >20 3 3 1 0 Cadmium ppm ASTM D5185m >20 3 3 1 0 Cadmium ppm ASTM D5185m >15 <1 <1 0 Cadmium ppm ASTM D5185m 0 10 0 0 Boron ppm ASTM D5185m	Water		WC Method	>0.2	NEG	NEG	NEG
Iron ppm ASTM D5185m >120 4 5 2 Chromium ppm ASTM D5185m >20 <1 0 <1 Nickel ppm ASTM D5185m >2 <1 0 0 Silver ppm ASTM D5185m >2 <1 0 <1 Aluminum ppm ASTM D5185m >2 <1 0 <1 Lead ppm ASTM D5185m >20 3 3 1 <1 0 Copper ppm ASTM D5185m >40 <1 1 0 <1 <1 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 <1 0 0 0 0 0 0 0 0 0 </th <th>Glycol</th> <th></th> <th>WC Method</th> <th></th> <th>NEG</th> <th>NEG</th> <th>NEG</th>	Glycol		WC Method		NEG	NEG	NEG
Chromium ppm ASTM D5185m >20 <1	WEAR METAL	S	method	limit/base	current	history1	history2
Chromium ppm ASTM D5185m >20 <1			ASTM D5185m	>120	4	5	2
Nickel ppm ASTM D5185m >5 <1	-				-		
Titanium ppm ASTM D5185m >2 <1							
Silver ppm ASTM D5185m >2 <1							
Aluminum ppm ASTM D5185m >20 3 3 1 Lead ppm ASTM D5185m >40 <1 1 0 Copper ppm ASTM D5185m >330 2 1 <1 Tin ppm ASTM D5185m >15 <1 <1 0 Vanadium ppm ASTM D5185m <1 <1 0 <1 Qandaium ppm ASTM D5185m <1 <1 0 <1 Cadmium ppm ASTM D5185m <10 0 <1 0 <1 ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 10 0 0 Magnaese ppm ASTM D5185m 0 1 0 0 Magnesium ppm ASTM D5185m 1010 898 935 913 Calcium ppm ASTM D5185m 1010 046							
Lead ppm ASTM D5185m >40 <1							
Copper ppm ASTM D5185m >330 2 1 <1					-		
Tin ppm ASTM D5185m >15 <1							
Vanadium ppm ASTM D5185m <1					_		
Cadmium ppm ASTM D5185m <1				210			
ADDITIVES method limit/base current history1 history2 Boron ppm ASTM D5185m 0 10 0 0 Barium ppm ASTM D5185m 0 1 0 4 Molybdenum ppm ASTM D5185m 60 57 53 62 Manganese ppm ASTM D5185m 0 <1 0 0 Magnesium ppm ASTM D5185m 1010 898 935 913 Calcium ppm ASTM D5185m 1010 898 935 913 Calcium ppm ASTM D5185m 1070 1101 982 1046 Phosphorus ppm ASTM D5185m 1270 1222 1180 1195 Sulfur ppm ASTM D5185m 2060 3179 2704 3174 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m							
Boron ppm ASTM D5185m 0 10 0 4 Molybdenum ppm ASTM D5185m 0 1 0 4 Molybdenum ppm ASTM D5185m 60 57 53 62 Manganese ppm ASTM D5185m 0 <1 0 0 Magnesium ppm ASTM D5185m 1010 898 935 913 Calcium ppm ASTM D5185m 1010 898 935 913 Calcium ppm ASTM D5185m 1070 1101 982 1046 Phosphorus ppm ASTM D5185m 1270 1222 1180 1195 Sulfur ppm ASTM D5185m 2060 3179 2704 3174 CONTAMINANTS method imit/base current history1 history2 Silicon ppm ASTM D5185m >20 2 4 2 Potassium ppm ASTM D5185m <t< th=""><th></th><th>ppiii</th><th></th><th></th><th></th><th></th><th></th></t<>		ppiii					
Barium pm ASTM D5185m 0 1 0 4 Molybdenum ppm ASTM D5185m 60 57 53 62 Manganese ppm ASTM D5185m 0 <1 0 0 Magnesium ppm ASTM D5185m 1010 898 935 913 Calcium ppm ASTM D5185m 1010 898 935 913 Calcium ppm ASTM D5185m 1010 898 935 913 Calcium ppm ASTM D5185m 1070 1101 982 1046 Phosphorus ppm ASTM D5185m 1070 1222 1180 1195 Sulfur ppm ASTM D5185m 2060 3179 2704 3174 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >20 2 4 2 INFRA-RED method limit/base							
Molybdenum ppm ASTM D5185m 60 57 53 62 Manganese ppm ASTM D5185m 0 <1							
Marganese ppm ASTM D5185m 0 <1	Boron		ASTM D5185m	0	10	0	0
Magnesium ppm ASTM D5185m 1010 898 935 913 Calcium ppm ASTM D5185m 1070 1101 982 1046 Phosphorus ppm ASTM D5185m 1150 1046 1046 956 Zinc ppm ASTM D5185m 1270 1222 1180 1195 Sulfur ppm ASTM D5185m 2060 3179 2704 3174 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 3 3 Sodium ppm ASTM D5185m >20 2 4 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.1 0.3 0.1 Nitration Abs/.tmm *ASTM D7624 >20 4.8 8.4 4.5 Sulfation Abs/.tmm *ASTM D74	Boron Barium	ppm	ASTM D5185m ASTM D5185m	0	10 1	0	0
Calcium ppm ASTM D5185m 1070 1101 982 1046 Phosphorus ppm ASTM D5185m 1150 1046 1046 956 Zinc ppm ASTM D5185m 1270 1222 1180 1195 Sulfur ppm ASTM D5185m 2060 3179 2704 3174 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 3 3 Sodium ppm ASTM D5185m >20 2 4 2 Solicon ppm ASTM D5185m >20 2 4 2 Sodium ppm ASTM D5185m >20 2 4 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 4.8 8.4 4.5 Sulfation Abs/.mm *ASTM D7415 >30	Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	10 1 57	0 0 53	0 4 62
Phosphorus ppm ASTM D5185m 1150 1046 1046 956 Zinc ppm ASTM D5185m 1270 1222 1180 1195 Sulfur ppm ASTM D5185m 2060 3179 2704 3174 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 3 3 Sodium ppm ASTM D5185m >25 3 3 3 Sodium ppm ASTM D5185m >20 2 4 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.1 0.3 0.1 Nitration Abs/cm *ASTM D7624 >20 4.8 8.4 4.5 Sulfation Abs/.1mm *ASTM D7415 >30 17.2 18.4 17.5 FLUID DEGRADATION method limit/ba	Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	10 1 57 <1	0 0 53 0	0 4 62 0
Zinc ppm ASTM D5185m 1270 1222 1180 1195 Sulfur ppm ASTM D5185m 2060 3179 2704 3174 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 3 3 Sodium ppm ASTM D5185m >25 3 3 3 Sodium ppm ASTM D5185m >20 2 4 2 Potassium ppm ASTM D5185m >20 2 4 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7624 >20 4.8 8.4 4.5 Sulfation Abs/cm *ASTM D7415 >30 17.2 18.4 17.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414	Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	10 1 57 <1 898	0 0 53 0 935	0 4 62 0 913
Sulfur ppm ASTM D5185m 2060 3179 2704 3174 CONTAMINANTS method limit/base current history1 history2 Silicon ppm ASTM D5185m >25 3 3 3 Sodium ppm ASTM D5185m >25 3 3 3 Potassium ppm ASTM D5185m >20 2 4 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.1 0.3 0.1 Nitration Abs/cm *ASTM D7624 >20 4.8 8.4 4.5 Sulfation Abs/.tm *ASTM D7624 >20 4.8 8.4 17.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.tm *ASTM D7614 >25 13.5 15.2 13.4	Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	10 1 57 <1 898 1101	0 0 53 0 935 982	0 4 62 0 913 1046
CONTAMINANTSmethodlimit/basecurrenthistory1history2SiliconppmASTM D5185m>25333SodiumppmASTM D5185m120PotassiumppmASTM D5185m>20242INFRA-REDmethodlimit/basecurrenthistory1history2Soot %%*ASTM D7844>40.10.30.1NitrationAbs/cm*ASTM D7624>204.88.44.5SulfationAbs/.tmm*ASTM D7415>3017.218.417.5FLUID DEGRADATIONmethodlimit/basecurrenthistory1history2OxidationAbs/.tmm*ASTM D7414>2513.515.213.4	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150	10 1 57 <1 898 1101 1046	0 0 53 0 935 982 1046	0 4 62 0 913 1046 956
Silicon ppm ASTM D5185m >25 3 3 3 Sodium ppm ASTM D5185m 1 2 0 Potassium ppm ASTM D5185m >20 2 4 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.1 0.3 0.1 Nitration Abs/cm *ASTM D7624 >20 4.8 8.4 4.5 Sulfation Abs/.1mm *ASTM D7615 >30 17.2 18.4 17.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7614 >25 13.5 15.2 13.4	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270	10 1 57 <1 898 1101 1046 1222	0 0 53 0 935 982 1046 1180	0 4 62 0 913 1046 956 1195
Sodium ppm ASTM D5185m 1 2 0 Potassium ppm ASTM D5185m<>20 2 4 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.1 0.3 0.1 Nitration Abs/cm *ASTM D7624 >20 4.8 8.4 4.5 Sulfation Abs/.1mm *ASTM D7415 >30 17.2 18.4 17.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.5 15.2 13.4	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270	10 1 57 <1 898 1101 1046 1222	0 0 53 0 935 982 1046 1180	0 4 62 0 913 1046 956 1195
Sodium ppm ASTM D5185m 1 2 0 Potassium ppm ASTM D5185m >20 2 4 2 INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.1 0.3 0.1 Nitration Abs/cm *ASTM D7624 >20 4.8 8.4 4.5 Sulfation Abs/.1mm *ASTM D7415 >30 17.2 18.4 17.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.5 15.2 13.4	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	10 1 57 <1 898 1101 1046 1222 3179	0 0 53 0 935 982 1046 1180 2704	0 4 62 0 913 1046 956 1195 3174
INFRA-RED method limit/base current history1 history2 Soot % % *ASTM D7844 >4 0.1 0.3 0.1 Nitration Abs/cm *ASTM D7624 >20 4.8 8.4 4.5 Sulfation Abs/.mm *ASTM D7415 >30 17.2 18.4 17.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.5 15.2 13.4	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	10 1 57 <1 898 1101 1046 1222 3179 current	0 0 53 0 935 982 1046 1180 2704 history1	0 4 62 0 913 1046 956 1195 3174 history2
Soot % % *ASTM D7844 >4 0.1 0.3 0.1 Nitration Abs/cm *ASTM D7624 >20 4.8 8.4 4.5 Sulfation Abs/.1mm *ASTM D7415 >30 17.2 18.4 17.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.5 15.2 13.4	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 1010 1070 1150 1270 2060	10 1 57 <1 898 1101 1046 1222 3179 current 3	0 0 53 0 935 982 1046 1180 2704 history1 3	0 4 62 0 913 1046 956 1195 3174 history2 3
Nitration Abs/cm *ASTM D7624 >20 4.8 8.4 4.5 Sulfation Abs/.1mm *ASTM D7415 >30 17.2 18.4 17.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.5 15.2 13.4	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 1010 1070 1150 1270 2060 kimit/base	10 1 57 <1 898 1101 1046 1222 3179 current 3 1	0 0 53 0 935 982 1046 1180 2704 history1 3 2	0 4 62 0 913 1046 956 1195 3174 history2 3 0
Nitration Abs/cm *ASTM D7624 >20 4.8 8.4 4.5 Sulfation Abs/.1mm *ASTM D7415 >30 17.2 18.4 17.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.5 15.2 13.4	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >25	10 1 57 <1 898 1101 1046 1222 3179 current 3 1 2	0 0 53 0 935 982 1046 1180 2704 history1 3 2 4	0 4 62 0 913 1046 956 1195 3174 history2 3 0 2
Sulfation Abs/.1mm *ASTM D7415 >30 17.2 18.4 17.5 FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.5 15.2 13.4	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 Imit/base >25	10 1 57 <1 898 1101 1046 1222 3179 current 3 1 2 current	0 0 53 0 935 982 1046 1180 2704 history1 3 2 4 history1	0 4 62 0 913 1046 956 1195 3174 history2 3 0 2 history2
FLUID DEGRADATION method limit/base current history1 history2 Oxidation Abs/.1mm *ASTM D7414 >25 13.5 15.2 13.4	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	10 1 57 <1 898 1101 1046 1222 3179 current 3 1 2 current 0.1	0 0 53 0 935 982 1046 1180 2704 history1 3 2 4 history1 0.3	0 4 62 0 913 1046 956 1195 3174 history2 3 0 2 history2 0.1
Oxidation Abs/.1mm *ASTM D7414 >25 13.5 15.2 13.4	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 <i>limit/base</i> >25 >20 <i>limit/base</i> >4 >20	10 1 57 <1 898 1101 1046 1222 3179 current 3 1 2 current 0.1 4.8	0 0 53 0 935 982 1046 1180 2704 history1 3 2 2 4 history1 0.3 8.4	0 4 62 0 913 1046 956 1195 3174 history2 3 0 2 history2 0.1 4.5
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	0 0 0 1010 1070 1150 1270 2060 imit/base >25 imit/base >4 >20 >30	10 1 57 <1 898 1101 1046 1222 3179 current 3 1 2 current 0.1 4.8 17.2	0 0 53 0 935 982 1046 1180 2704 history1 3 2 4 history1 0.3 8.4 18.4	0 4 62 0 913 1046 956 1195 3174 history2 3 0 2 history2 0.1 4.5 17.5
Dase Number (BN) mg Kung ASTM 02896 9.8 9.2 7.4 9.3	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	0 0 0 1010 1070 1150 2260 225 220 220 imit/base >4 >20 >30 imit/base	10 1 57 <1 898 1101 1046 1222 3179 Current 3 1 2 Current 0.1 4.8 17.2 Current	0 0 53 0 935 982 1046 1180 2704 history1 3 2 2 4 history1 0.3 8.4 18.4 18.4	0 4 62 0 913 1046 956 1195 3174 history2 3 0 2 history2 0.1 4.5 17.5 history2
	Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE Oxidation	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm ppm ppm ppm ppm pp	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7414	0 0 0 1010 1070 1150 1270 2060 /////////////////////////////////	10 1 57 <1 898 1101 1046 1222 3179 Current 3 1 2 Current 0.1 4.8 17.2 Current 13.5	0 0 53 0 935 982 1046 1180 2704 history1 3 2 2 4 history1 0.3 8.4 18.4 18.4 history1	0 4 62 0 913 1046 956 1195 3174 history2 3 0 2 history2 0.1 4.5 17.5 history2 13.4

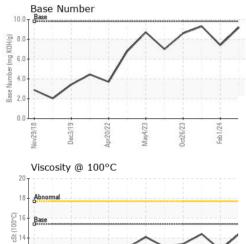


12 10

Nov29/18

OIL ANALYSIS REPORT





pr20/22

Dec3/19

Mav4/23

Oct26/23

Feb1/24

Laboratory

Sample No. Lab Number **Unique Number**

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual	20.2	NEG	NEG	NEG
FLUID PROPE	ERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.4	12.8	14.4
GRAPHS						
Ferrous Alloys						
I iron	1.1.1					
- chromium	Λ					
) -	/\					
)+	/ \					
)	$\langle \cdot \cdot \rangle$					
,	1					
		_				
719	/23	723	+7/			
Nov29/18	May4/23	Jct26/23	reb 1/24			
≥ Non-ferrous Meta		-				
5 _T						
copper	Λ					
tin	11	1				
5	11					
	11					
	1					
5.						
	L	~	_			
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		d'élémene			
Nov29/18 Dec3/19 Apr20/22	May4/23	0ct26/23	FeD 1/24			
		00	E			
Viscosity @ 100°	С			Base Numbe	r	
Abnormal			10.0	Base		
7			<del>~</del> 8.0		$\wedge$	$ \land I $
			8.0 6.0 Base Number (mg KOH/g)			
Base			E 6.0		/	
•	$\wedge$	$\wedge$	nber /		1	
Abnormal			4.0	. /	~	
2			<u>2.0</u>	$\sim$		
1						
	23	23	+ 0.0	61 61	22 +	23 -
Nov29/18 Dec3/19 Apr20/22	May4/23	0ct26/23	Feb 1/24	Nov29/18 Dec3/19	Apr20/22 May4/23	0ct26/23 Feb1/24
Nc Ap	Z	õ	-	NG	Ar	ő ^L
/earCheck USA - 50				GFL E	nvironmental - 9	
FL0115628	Recei		1 Jun 2024		2300	Deerfield Ave
6217817 1096014	Teste		5 Jun 2024	oc Davia		Suamico, V
1096014	Diagr	iusea :25	5 Jun 2024 - W		Contact: NICHO	US 5431
LEET	vice at 1 G	200 227 126	_			LAS WEIDNE

Test Package : FLEET To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

Certificate 12367

nweidner@gflenv.com

T:

F: